



Wireless Communications

EE 670

Course Information

Aditya K. Jagannatham



Introduction

- **Instructor: Prof. Aditya K. Jagannatham**
- Coordinates
- ACES 205D
 - Mailbox on 2nd floor ACES Building.
- e-mail: adityaj@iitk.ac.in
- Ph: 7494



Text Books

- Fundamentals of Wireless Communication
 - David Tse and Pramod Viswanath
 - Cambridge University Press, 2005
 - <http://www.eecs.berkeley.edu/~dtse/book.html>
- Wireless Communications
 - Andrea Goldsmith
 - Cambridge University Press
- Wireless Communications: Principles and Practice, 2nd Edition
 - Theodore Rappaport
 - Prentice Hall PTR



Points Division

	Weightage
Assignments (Theory + MATLAB)	15%
Mid-Sem	30%
Term Paper	15%
End-Sem	40%



Prereqs

- Basic idea of Digital Communications
- Probability and Stochastic Processes
- Linear Algebra, Matrices etc.
- Comfort at Math.



Aims

- Has a theoretical and practical flavor.
- Theory behind wireless communication systems.
 - How is it different from conventional wireline based digital communications?
- Development of mathematical models and performance analysis of wireless systems.
- Intro to key wireless technologies such as CDMA, OFDM, MIMO etc.
- Intro to wireless standards such as GSM, WCDMA, LTE, to understand how everything comes together in a practical system.
- Term paper will focus on in-depth study of cutting edge wireless issues.